STORMWATER MANAGEMENT SITE DEVELOPMENT PLAN REVIEW CHECKLIST

This checklist must be completed, signed, and submitted by the Consultant with the design phase submittal. The purpose of this checklist is not only to facilitate an efficient review, but also to assist the Consultant in planning their site design work flow, to aid in QA/QC of complete submittal packages, and ultimately to assist in achieving faster permitting. To complete the form, circle the appropriate response, "Y, N, or N/A", for each item, to designate if performed, and documentation included in submittal. Under "note", include location within submittal package (sheet number, and location or detail number, or page number and paragraph of report, etc.) for Y items. Alternately, include why N or N/A is acceptable for the site, based upon the Stormwater Management Ordinance and the Local Design Manual. Feel free to contact the City of Savannah Stormwater Management Department at 912-650-7855 if you have any questions.

Concept Design Phase

	Circle one	Note
1. Procure and provide site mapping to illustrate the layout of the proposed development project and show in general how post construction stormwater runoff will be managed on the development site. Mapping for concept may be based on preliminary survey information such as enlarged USGS map, GIS data, deed plots, or old field survey, etc.	Y N N/A	
2. Provide a thorough assessment of the Natural Resources including both terrestrial and aquatic found on the development site by acceptable site reconnaissance and surveying techniques.	Y N N/A	
3. Show the site at adequate scale to demonstrate location within the City limits. Including, at minimum, the following details in a conceptual proposal, using appropriate tables, plans, and narratives as required:	Y N N/A	
A) Project acreage	Y N N/A	
B) Building location, area (foot print) and finish floor elevations	Y N N/A	
C) Most current FEMA flood zone delineation, include the Flood Insurance Rate Map, Community map number and the effective date.	Y N N/A	
D) Impervious area (pre and post development condition)	Y N N/A	
E) Stormwater unit area, parking and tree area delineation	Y N N/A	
F) Wetland delineations. Clearly note on plan if there are or aren't any wetland areas found in and/or within 200 feet of the project area.	Y N N/A	
G) Waters of the State within 200 feet of the project area.	Y N N/A	
H) A presentation of proposed phasing plan(s) if the project will be divided into several phases.	Y N N/A	

4. Assess potential application of green infrastructure practices in the form of better site planning and design techniques. Low impact development practice should be used to the maximum extent practicable during the creation of a stormwater management concept plan. At a minimum, the following site information shall be considered, utilizing available information instead of field exploration for concept development:	Y N N/A	
A) Soil type (from Soil Study)	Y N N/A	
B) Depth of ground water on site	Y N N/A	
C) Whether the type of development proposed is a hotspot as defined by the Ordinance and Design Manual. If yes, address how this influences the concept proposal?	Y N N/A	
5. Provide preliminary calculation to verify the site is suitable for the proposed project scale and layout to satisfy the Post-construction Stormwater Management Design Criterias and requirements of the current City of Savannah Stormwater Ordinance.	Y N N/A	
6. Briefly summarize in separate report the stormwater management strategy to be utilized for the proposed site design. This report shall be signed and sealed by the GA Registed PE.	Y N N/A	

Detailed Design Phase

	Circle One	Note
1. Provide site survey plan with the drainage submittal. The site survey plan shall include but is not limited to the following:	Y N N/A	
A) Date(s) of survey and revisions	Y N N/A	
B) Bench mark with elevation, the bench mark shall have coordinates based on the Georgia State Plane Coordinate System, East Zone, North American Datum of 1983 (NAD 83). Elevation shall be based on the North American Vertical Datum of 1988 (NAVD 88).	Y N N/A	
C) Existing and proposed right of way, easements and set backs	Y N N/A	
D) Adjacent structures and names of property owners	Y N N/A	
E) Property identification number (PIN)	Y N N/A	
F) Gross acreage of property	Y N N/A	
G) Show environmental features, including landfills	Y N N/A	
H) Topographic contours in 1 foot intervals	Y N N/A	
I) Property line bearings and distances	Y N N/A	
J) North arrow and scale.	Y N N/A	
K) Professional stamp and signature	Y N N/A	

L) Location of all existing utilities, structures above ground and underground (pipe, manholes/catch basins with top and invert elevations, drive, walkway, fence, etc.), information on downstream system which the proposed storm system is connecting to. At least two (2) downstream manholes shall be surveyed.	Y N N/A	
M) Most current FEMA flood zone delineation, include the Flood Insurance Rate Map, Community map number and the effective date.	Y N N/A	
N) Wetland delineations. Clear note on plan if there are or aren't any wetland areas found in and within 200 feet of the project area.	Y N N/A	
O) Water of the state within 200 feet of the project area.	Y N N/A	
2. Provide a thorough assessment of the Natural Resource Inventory including both terrestrial and aquatic found on the development site by acceptable site reconnaissance and surveying techniques if Concept Design phase was not exercised.	Y N N/A	
3. Assess potential application of green infrastructure practices in a detailed manner. Better site planning and design techniques and low impact development practice shall be used to the maximum extend practical. The following site information shall be considered:	Y N N/A	
A) Soil type.	Y N N/A	
B) Depth of ground water on site.	Y N N/A	
C) Whether the type of development proposed is a hotpot as defined by the Ordinance and Design Manual. How does this influence site design?	Y N N/A	
4. Provide a summary narrative/report of how the post-construction stormwater runoff will be managed on the development site meeting the five((5) post-construction stormwater management criteria as described in City of Savannah Stormwater Management LDM.	Y N N/A	
A) Meeting Stormwater Runoff Reduction	Y N N/A	
B) Meeting Stormwater Quality Protection	Y N N/A	
C) Meeting Aquatic Resource Protection	Y N N/A	
D) Meeting Overbank Flood Protection	Y N N/A	
E) Meeting Extreme Flood Protection	Y N N/A	
F) Provide soil maps; boring locations with geotechnical report if needed.	Y N N/A	
G) Hydrology: provide runoff curve number determinations, time of concentration, and hydrograph generation (SCS methods) for pre- and post developed conditions with worksheets.	Y N N/A	

H) Hydraulics: Specify assumptions and coefficients used; Provide stage-storage table and curve. Provide pond routing of post-development hydrographs for appropriate design storms as defined in the City of Savannah Stormwater Management Ordinance; Provide riser/outlet structure analysis and emergency spillway adequacy/capacity analysis.	Y N N/A	
I) Provide pipe size calculations.	Y N N/A	
5. The detention facility calculated volume base elevation shall be above the 25 year flood elevation, such elevation and the tail water elevation for the City's outfall shall be obtained from the latest FEMA Flood Insurance Rate Map Study. A soil survey may be required within the proposed detention facility which demonstrates the elevation as above the seasonal ground water elevation.	Y N N/A	
6. Match pipe crown elevations, at minimum where possible.	Y N N/A	
7. Show drainage pattern, property ridge line(s), and building finish elevation on the grading plan.	Y N N/A	
8. Clearly note on plans:	Y N N/A	
A) A Right of Way Permit shall be obtained prior to performing construction activity in the City's R.O.W	Y N N/A	
B) Chlorinated disinfected water shall not be discharged into the stormwater system.	Y N N/A	
C) Call before you dig note.	Y N N/A	
9. Provide downstream and surrounding neighborhood area analysis to identify any existing capacity hotspots, and drainage blockage situation at neighboring property due to the proposed development.	Y N N/A	
10. Direct connection of a building's downspouts into a City system shall be discouraged.	Y N N/A	
11. No stormwater discharge to the adjacent property allowed without written approval of the neighboring property owner. Stormwater private easement and agreement shall be provided for neighboring property.	Y N N/A	
12. Provide stormwater pipe profiles with 25 and 100 year HGL. Show all existing and proposed utility crossings on profiles.	Y N N/A	
13. Note on plans the City's right to always allow access property to inspect stormwater facilities.	Y N N/A	
14. Include note on plans requiring compliance with video taping procedures for stormwater facilities as prescribed in the City's document titled "New Construction Televising Procedures Manual" as prepared by the Water and Sewer Department.	Y N N/A	
15. Prepare Stormwater management system inspection and maintenance plan.	Y N N/A	
16. Provide Soil Erosion/Sedimentation Control plan to include the following information:	Y N N/A	

A) Description of site activity and amount/degree of disturbance.	Y N N/A	
B) Existing site conditions (topography, vegetation, drainage)	Y N N/A	
C) Soil type, description, and boundary	Y N N/A	
D) Name and 24 hour number of local contact responsible for erosion and sedimentation control	Y N N/A	
E) Methods to be used in Erosion and Sedimentation Control plan	Y N N/A	
F) Permanent site stabilization, establishment and maintenance	Y N N/A	
G) Provisions for use of onsite detention pond as temporary sediment basin with clean out schedule & instructions for conversion to a permanent facility.	Y N N/A	
H) Calculations needed to assure adequacy of basin and structures	Y N N/A	
I) Construction schedule (graph or table), including a note in **Bold Letter**: "**The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities**."	Y N N/A	
J) Maintenance statement note: "Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."	Y N N/A	
K) Note: "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."	Y N N/A	
L) Tree locations and protection fences on demolition plans.	Y N N/A	
17. All plans and reports shall be signed and sealed by registered Georgia Professional Engineer	Y N N/A	
18. Provide signed and sealed Engineer Certification Letter	Y N N/A	

19. After the project has been constructed, As-builts (Record Drawings) must be submitted to the City of Savannah Development Services Office as required by City of Savannah Procedure for handling Close-out Documents for Private Development Projects. The size of the drawings shall be 24" x 36". As-builts shall have a coordinate system based on the Georgia State Plane Coordinate System, East Zone, North American Datum of 1983 (NAD 83). Elevations shown shall be based on the North American Vertical Datum of 1988 (NAVD 88). All measurements and coordinates shown shall use the U.S. Survey Foot definition. Coordinates shall be shown on all drainage structures, detention outlet control structures, manholes. It is suggested that this data format be used at the beginning of the project in the site design phase.	Y N N/A	
20. Acknowledge the responsibilities and costs which are associated with the necessary items as part of the close out documents in order to obtain a final Certificate of Occupancy. These items are listed in Appendix "B" as a reminder in the City's Stormwater Management Development's Acceptance Letter for development.	Y N N/A	

The above checklist shall be used as a minimum guideline for drainage development requirements and must be completed and signed by the engineer proposing the development with his/her plans to the Development Service Office. As the developer's engineer completes an item, he/she shall document the fact of completion by circling the appropriate 'Y, N, or N/A' in the box for that particular item. The box at the right of the form is for explanation of where to find items included for each Y response. Alternately, the box is for explaining why N or N/A is appropriate, based upon the City's Stormwater Ordinance and/or Local Design Manual. Please ensure that the portion below is filled out in its entirety:

Name of Development: _____

Developer's Engineer Name: _____
Developer's Engineering Firm: _____
Developer's Engineer Signature: _____
Date City Reviewer Received: _____
Date City Review Comments Issued: _____